



TO THE MAGNIFICENT RECTOR
OF THE UNIVERSITY OF MILAN CODE ID: 6955

The undersigned requests to be admitted to participate in the public selection, based on qualifications and exams, for the awarding of a research grant at the Dipartimento di

Scienze Cliniche e di Comunità dell'Università degli Studi di Milano

Scientific Director: **Prof. Agostoni Carlo Virgilio**

[Name and Surname] Amna Rashid Tariq

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	Tariq
Name	Amna Rashid

CURRENT EMPLOYMENT

Assignment	Structure
Post doc fellow	Seoul National University Hospital, Biomedical Research Institute, Seoul, Korea.

EDUCATION AND TRAINING

Title	Course of study	University	year of obtaining the title
Master's Degree or equivalent	Zoology	Govt. College University Lahore, Punjab, Pakistan.	2004
M.Phil course work and research	Animal Sciences: endocrinology	Quaid-i-Azam University, Islamabad, Islamabad, Pakistan.	2007
PhD	Animal Sciences: endocrinology	Quaid-i-Azam University, Islamabad, Islamabad, Pakistan.	2014
Master			
Medical Specialization Diploma			



European Specialization Diploma			
Other	Some of the PhD research project carried out in Australia	Monash University Australia	2010

REGISTRATION TO PROFESSIONAL ORDERS

Registration date	Order	City

FOREIGN LANGUAGES KNOWN

languages	level of knowledge
English	Proficient reading, writing, spoken and understanding

AWARDS, RECOGNITIONS AND SCHOLARSHIPS

year	Award Description
(20-08-2007) to (20-08-2012)	Indigenous Ph.D. Fellowship awarded by Higher Education Commission (HEC) of Pakistan: fellowship for M.Phil leading to PhD studies.
(5-12-2009 to 30-05-2010)	Award of scholarship under International Research Support Initiative Program by Higher Education Commission of Pakistan for Monash University Australia for 6 months
11-15 July, 2010	Young Investigator Travel Award to attend 7 th International Congress of Neuroendocrinology, held at University of Rouen, France.

TRAINING OR RESEARCH ACTIVITIES

<p>Description of the activity</p> <p>Postdoc:</p> <p>I have completed my 1 year postdoc (stem cell culture: August 2023) in Seoul National University Hospital Korea. I would love to bring my expertise and skills to your efficient team. I availed my PhD (Animal Sciences: endocrinology: 2014), in Quaid-i- Azam University Islamabad, Pakistan but I did part of my PhD research in Monash University Australia.</p>
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- **Extensive research experience:** During my **postdoc**, I worked on the therapeutic effect of a drug (gemigliptin) **on stem cells** i.e., endothelial progenitor cells (EPCs) isolated from peripheral blood samples of diabetic patients (in vitro drug administration).
- **Scientific track record+ Experience in specific techniques:** I **isolated and cultured** the EPCs. I characterized morphological markers of EPC cells (CD34, CD44, CD31, KDR) by using **multiple direct fluorescence immunocytochemistry, western blot and Flow cytometric analysis**. I checked the phenotypic characteristics of EPCs by Dil-AcLDL and ulexlectin uptake. The effect of drug doses on EPC cells was monitored by using **western blot** and viability assays. During **cell culture** I worked regularly with cell counting, culture, sub culture, cryopreservation and recovery of cells in liquid nitrogen. I have **two first author articles from this postdoc, one of which is a review on endothelial progenitor cells**
- My **M.Phil.** Project was based on finding the expression of a neuropeptide (metastin) in the reproductive tissue of rhesus monkey. To achieve this **single indirect fluorescence Immunohistochemistry was employed**.
- The preliminary data obtained from my MPhil studies lead to the development of my PhD project. During my **PhD research**, I deciphered the role of metastin and its receptor (GPR54: G protein coupled receptor) signaling in the reproductive tissue of rhesus monkey using **multiple fluorescence Immunohistochemistry (indirect) and RTPCR**. I used primary and secondary antibodies for metastin and GPR54 to observe its co-localization with biomarkers of sperm cells in testis tissue. A direct effect of metastin on **tissue homogenates** was observed and the co concentration of inhibin, metastin and testosterone was analyzed using **ELISA** for each hormone. I have a great experience of learning and working of different immunohistochemistry and immunocytochemistry techniques, **histology, tissue embedding in paraffin, section cutting, fluorescence confocal microscopy and image analysis** in the lab of Prof. Iain Clarke, Monash University Australia during my PhD. I am immensely motivated to learn new techniques.
- In my **M.Sc** research project, I isolated and cultured the gram positive bacteria using physical and bio-chemical methods.
- **Writing of scientific articles and journals:** I have two first authored articles from PhD, I have five first authored articles and a total of 8 articles in peer reviewed journals.
- **Organization and management of the project independently:** In my PhD project, I developed and optimized my research project independently, and designed technique protocols through an



extensive literature review. I am dedicated to learn new techniques for my career and lab project development. I am motivated to work on interdisciplinary environment.

- **Ability to design experiments independently:** I inculcated new lab techniques into projects through regular extensive literature review. I learned the statistics software to analyze results of various experiments. I maintained lab equipment, discussed the research results with my supervisor and lab team regularly. For my project experiments during my PhD, I managed chemical stocks, I ordered chemicals to companies, kept track of my orders regularly.
- **Strong collaborative nature.** I trained the undergraduate student and helped other lab fellows during my PhD and postdoc in various lab techniques. The names of my lab fellows can be find in my publications both from PhD and postdoc which shows that I worked as a team in my projects. I have research experiences in two international labs which represents that I am capable to work internationally.
- **Presentation of project reports at meetings and seminars:** I also have experience of presenting results in conferences.
- **Dedication.** I performed my PhD and postdoc projects with utmost dedication to research. My research journey uptill now represents that I am moving forward in my research passion.
- **Grant applications and paper preparation.** My PhD was funded by an indigenous competitive fellowship in Pakistan which indicates that I am capable of developing applications for grants.

PROJECT ACTIVITY

Year	Project
2022-2023	<p>Postdoc project:</p> <p>During my postdoc, I worked on the therapeutic effect of a drug (gemigliptin) on stem cells i.e., endothelial progenitor cells (EPCs) isolated from peripheral blood samples of diabetic patients (in vitro drug administration).</p> <ul style="list-style-type: none">• I isolated and cultured the EPCs. I characterized morphological markers of EPC cells (CD34, CD44, CD31, KDR) by using multiple direct fluorescence immunocytochemistry, western blot and Flow cytometric analysis. I checked the phenotypic characteristics of EPCs by Dil-AcLDL and ulexlectin uptake. The effect of drug doses on EPC cells was monitored by using western blot and viability assays. During cell culture I worked regularly with cell counting, culture,



	sub culture, cryopreservation and recovery of cells in liquid nitrogen. I have two first author articles from this postdoc, one of which is a review on endothelial progenitor cells
2007-2013	PhD project <ul style="list-style-type: none">The preliminary data obtained from my MPhil studies lead to the development of my PhD project. During my PhD research, I deciphered the role of metastin and its receptor (GPR54: G protein coupled receptor) signaling in the reproductive tissue of rhesus monkey using multiple fluorescence Immunohistochemistry (indirect) and RTPCR. I used primary and secondary antibodies for metastin and GPR54 to observe its co-localization with biomarkers of sperm cells in testis tissue. A direct effect of metastin on tissue homogenates was observed and the concentration of inhibin, metastin and testosterone was analyzed using ELISA for each hormone. I have a great experience of learning and working of different immunohistochemistry and immunocytochemistry techniques, histology, tissue embedding in paraffin, section cutting, fluorescence confocal microscopy and image analysis in the lab of Prof. Iain Clarke, Monash University Australia during my PhD. I am immensely motivated to learn new techniques.
2006-2007	M.Phil. Research <ul style="list-style-type: none">My M.Phil. Project was based on finding the expression of a neuropeptide (metastin) in the reproductive tissue of rhesus monkey. To achieve this single indirect fluorescence Immunohistochemistry was employed.
2003-2004	M.Sc research <ul style="list-style-type: none">In my M.Sc research project, I isolated and cultured the gram positive bacteria using physical and bio-chemical methods.

PATENT OWNERSHIP

Patent
no



CONGRESSES, CONFERENCES AND SEMINARS

Date	Title	Site
11-15 July, 2010	Expression of kisspeptin and its receptor in rhesus monkey testis, 7th Neuroendocrinology Congress, Poster presentation.	University of Rouen, Rouen, France.
13-15 December 2018	Conference SAAP and PPS 16 biennial conference	University College of Medicine and Dentistry, University of Lahore
4 August, 2016	National Symposium on 'Potential impact of genetic testing and counseling.	Department of Molecular Biology, Virtual University of Pakistan, Lahore.

PUBLICATIONS

Books
[title, city, publisher, year...]
[title, city, publisher, year...]
[title, city, publisher, year...]

Journal Articles
[article title, magazine, city, publisher, year...]
Lee M, Tariq AR (Lee and Tariq are co-First authors), Kim M. Gemigliptin, a potent selective dipeptidyl peptidase 4 inhibitor, protects endothelial progenitor cells by oxidative stress via caspase-3 dependent pathway. Biochem Biophys Rep. 2024 Mar 2;38:101673. doi: 0.1016/j.bbrep.2024.101673. PMID: 38444735; PMCID: PMC10914559.
Tariq AR, Lee M, Kim M. Endothelial Progenitor Cells: A Brief Update. Int J Stem Cells. 2023 Nov 30. doi: 10.15283/ijsc23106. Epub ahead of print. PMID: 38030386.
Sajid F, Anwar H, Rasul A, Imran A, Malik SA, Zafar S, Maqbool J , Akram R, Ijaz F, Tariq AR, Hussain G. Indian ginseng (N.Hexane and Chloroform extracts) offers ameliorating effects on muscle functions restoration in a mouse model of peripheral nerve injury. International Journal of Biosciences. 2021; 18: 231-240. DOI: http://dx.doi.org/10.12692/ijb/18.5.231-240 .
Rehman A. Jawed S, Tariq AR. Link between Autoimmune Hypothyroidism and Polycystic



<p>Ovary Syndrome. The Professional Medical Journal. 2020; 27:1804-1808. DOI: https://doi.org/10.29309/TPMJ/2020.27.09.3750</p>
<p>Sheik h ZI, Tariq AR, Shoaib A, Mahmood S. Comparative study of acylated ghrelin levels in obese diabetes mellitus type 2 and lean diabetes mellitus type 2 female aged 30-45. The Professional Medical Journal. 2020; 27(11):000-000. DOI: https://doi.org/10.29309/TPMJ/2020.27.11.4390</p>
<p>Tariq AR, Rahman Z. Neuropeptidergic regulation of pancreatic hormones, a therapeutic approach for type 2 diabetes mellitus. Science Letters. 2018. 6: 23-27. http://thesciencepublishers.com/science_letters/files/v6i1-5-132017029-SL.pdf.</p>
<p>Tariq AR, Shabab M. Effect of kisspeptin challenge on testosterone and inhibin secretion from in vitro testicular tissue of adult male rhesus monkey (Macaca mulatta). Andrologia. 2017. 49(1). DOI: 10.1111/and.12590.</p>
<p>Tariq AR, M Shahab, IJ Clarke, A Pereira, JT Smith, S Khan, J Sultan, S Javed, T Anwar. Kiss1 and Kiss1 receptor expression in the rhesus monkey testis: a possible local regulator of testicular function. Central European Journal of Biology. 2013. 8: 968-974. https://doi.org/10.2478/s11535-013-0219-4</p>

Conference Proceedings
Poster presentation
<p>Expression of kisspeptin and its receptor in rhesus monkey testis, 7th Neuroendocrinology Congress, Poster presentation, University of Rouen, Rouen, France. 11-15 July, 2010.</p>
<p>[title, structure, city, year] Conference SAAP and PPS 16 biennial conference, University College of Medicine and Dentistry, University of Lahore, 13-15 December 2018.</p>
<p>[title, structure, city, year] National Symposium on 'Potential impact of genetic testing and counseling', Department of Molecular Biology, Virtual University of Pakistan, Lahore. 4 August, 2016.</p>

MORE INFORMATION

<u>Research Supervision and training</u>



- I trained research techniques to my junior lab fellow during my post doc at Seoul National University Hospital, Korea.

Technical Skills

- Fluorescence Immunocytochemistry, Fluorescence Immunohistochemistry
- Multiple Fluorescence immunocytochemistry, Fluorescence Imaging, Microscopic techniques (confocal microscopy, inverted microscopy), histology, tissue embedding in paraffin, section cutting, Western blot, Reverse Transcriptase PCR (RT-PCR), Immunoassays (ELISA). Stem Cell Culture, tissue culture, tissue homogenate. Cell counting, cryopreservation of cells in liquid nitrogen and recovery. Flow cytometric analysis
- Gram positive bacteria cell culture (Physical and biochemical characterization)
- Computer skills: Microsoft Office (word, PowerPoint, excel)
- Graphics: Adobe Photoshop
- Statistical elaboration: GraphPad, Image J

The declarations made in this curriculum vitae are to be considered as having been released pursuant to articles 46 and 47 of Presidential Decree no. 445/2000.

This curriculum does not contain sensitive data and judicial data as per art. 4, paragraph 1, letters d) and e) of Legislative Decree 30.6.2003 n. 196.

WE REMEMBER that the curricula **WILL BE MADE PUBLIC on the University website** and therefore please do not enter sensitive and personal data. This model is already pre-built to meet the need for publication without sensitive data.

Please **DO NOT SIGN** this form.

Place and date: Lahore, Pakistan, 11.06.2024